

E-mail response 3-11-08

in Grant File.

**DRAFT**  
**REVISED WORKPLAN FOR THE**  
**KAU WASTEWATER TREATMENT WORKS PROJECT**  
**Na'alehu, County of Hawai'i, Hawai'i**  
**Revised February 2008**

**TABLE OF CONTENTS**

I.	Project Background	1
II.	Project Objectives	1
III.	Scope of EPA-Funded Portion of Project	2
IV.	Project Deliverables and Cost Breakdown	4
V.	Intended Financing	5
VI.	Measures of Success	5
VII.	Reporting Schedule	5
VIII.	Attachments	6

**I. Project Background**

The Na'alehu and Pahala communities are the population centers of the District of Kau in the County of Hawai'i (Attachment 1) and were established as a result of sugar farming and processing operations. Together, the communities are home to nearly three quarters of Kau's small population. Most of the residents of Na'alehu and Pahala are served by sewer systems that are currently owned and operated by C. Brewer and Company, Ltd. (C. Brewer). The wastewater collected by the sewer system discharges into a large capacity cesspool (LCC) or "gang" cesspool. Federal regulations promulgated by the U.S. Environmental Protection Agency (EPA) in 1999 require that LCCs be eliminated by April 5, 2005.

Subsequent to C. Brewer's request for assistance, the County's Community Outreach Committee conducted meetings with the affected communities in Na'alehu and Pahala on April 29, 2004 and April 30, 2004 to present sewer system alternatives that would replace the LCC system. On August 31, 2004, the County mailed letters to homeowners describing the alternative sewer improvements including a ballot to allow selection of the preferred alternative were sent to each property owner currently connected to the existing C. Brewer sewer system. Of the 189 ballot cards returned, 165 votes or 87% of the ballots were in favor of Alternative No. 1 which is described in Section 3 of this workplan.

In January 2005, M&E Pacific, Inc. evaluated the C. Brewer owned and operated sewer systems in Na'alehu and Pahala at the request of C. Brewer. The purpose was to assess the condition of the existing sewer systems in Na'alehu and Pahala. A report ("draft final" form dated December 2004) describing the investigation and findings is on file at the County of Hawai'i, Department of Environmental Management office.

Sometime in 2006, C. Brewer informed the County of their impending dissolution and therefore will no longer continue to own and manage the existing community sewer systems once the dissolution process has been completed. The County who has the authority to own and operate community sewer systems entered into a formal agreement with C. Brewer on April 20, 2007 to implement improvements to the existing sewer system and subsequently own and operate the improved system. According to the agreement, ownership of the improved system will transfer to the County on April 30, 2010 or whenever improvements have been completed, whichever occurs first. In addition, C. Brewer will fund and install the private sewer laterals and donate land to the County for siting the new sewer treatment and disposal facilities that will serve each community. Since the time of the agreement, the County has determined that additional land will be required to adequately accommodate the sewer treatment system planned for each community.

**II. Project Objectives**



The goal of the project is to eliminate the C. Brewer-owned LCCs that are currently serving the Na'alehu and Pahala communities. This project will also replace the substandard sewer systems that are more than 60-years old in both communities.

### III. Scope of EPA-Funded Portion of Project

The portion of the project intended to be funded with EPA funds includes the design and construction of the improvements to the existing sewer system in Naalehu (Attachment 2). Work will begin on Na'alehu before Pahala because land options have already been identified for the treatment and disposal facility.

Specifically, the project involves the replacement of the sub-standard sewer lines that run within private properties with new sewer lines that will be installed in the County roadways. Approximately 8,360 linear feet (LF) of 8 inch sewer lines will be installed in Naalehu. A large capacity septic system (LCSS) will be installed to treat the wastewater. Effluent disposal will be addressed via an absorption bed system. The existing LCC will be converted to a seepage pit to serve as a back-up means of effluent disposal.

The project consists of seven major tasks as follows:

#### Task 1: Planning

The majority of the planning work has been completed. A Final Preliminary Engineering Report (PER) for Na'alehu and Pahala Large Capacity Cesspool Conversion Projects dated July 2007 was prepared by SSFM International for the County of Hawai'i. The PER describes the existing conditions and evaluates collection, treatment and disposal alternatives for the sewer system improvements. A Final Environmental Assessment (EA) dated August 2007 was published with a FONSI determination for this project.

#### Task 2: Na'alehu Land Acquisition

A Phase I ESA report was completed on October 31, 2007 for a property (TMK 9-5-024:010) adjacent to the existing LCC site with the intention of using it as a buffer zone and a means of access to the proposed LCSS site. The report did not identify any recognizable environmental conditions (RECs). Therefore, it was determined that a Phase II ESA was not required.

Due to the larger size of TMK 9-5-024:007 (1.944 acres versus 14,345 sq. ft.) located in the immediate vicinity, the County is currently exploring the possibility of acquiring this property as the alternative to be added to the land donated by C. Brewer. This larger parcel will afford an adequate buffer zone between neighboring properties and the LCSS system as well as the installation of an absorption bed system for disposal of effluent. The current seepage pit is sited well above the Underground Injection Control (UIC) line where new injection wells are prohibited. The possibility of failure of a seepage pit that is designated as the only means of disposal could consequently result in no means for disposal of effluent. The land acquisition process involves an Environmental Site Assessment (ESA), topographic and boundary survey, appraisal, offer, negotiation, and transfer of title.

The County is also in the process of acquiring easements within the Na'alehu area to accommodate portions of the sewer collection system that require installation within private property as a result of topographic issues.

#### Tasks 3: Na'alehu Design

The PER and EA will be revised to reflect the current plans for placement of the LCSS on TMK 9-5-024:007 in the event that the County is successful in acquisition of the property. The EA would be in compliance with EPA Environmental Review Requirements as a "NEPA-like" program. Construction plans and specifications will be prepared for the new collection system and LCSS. Required permits will be obtained.

#### Tasks 5: Na'alehu Construction

The construction contract will provide for the construction of the approved construction plans and specifications. The County will provide for field engineering inspection of the construction including design changes dictated by field and/or construction conditions, review of contractor's drawings, and assurance of contractor compliance with plans and specifications. C. Brewer is responsible for installation of the new sewer laterals within private properties.

### IV. Project Deliverables and Cost Breakdown

Table 1 (Attachment No. 3) details the implementation schedule, deliverables and estimated cost for the project's Tasks and Sub-tasks

### V. Intended Financing of the Project Costs

The total construction cost of the Na'alehu portion of the project is currently estimated at about \$9,776,273 including planning, land acquisition, design and construction. Table 2 indicates the allocation of funding resources unless additional state or federal funds become available. It is intended that the federal grant funds be put towards the Na'alehu community since the construction cost of Na'alehu and Pahala alone far exceeds the federal grant amount.

**TABLE 2: Allocation of Funding Resources**

<i>Source</i>	<i>Amount of Funding</i>	<i>% of Project Funding</i>
Federal Grant	\$1,842,150	18.84 %
State of Hawaii Clean Water State Revolving Fund	\$5,714,079	58.45 %
State of Hawaii, HEER office grant for ESA Phase I	\$4,478	0.05%
County of Hawaii	\$2,215,566	22.66 %
<b>Total</b>	<b>\$9,776,273</b>	<b>100%</b>

### VI. Measures of Success

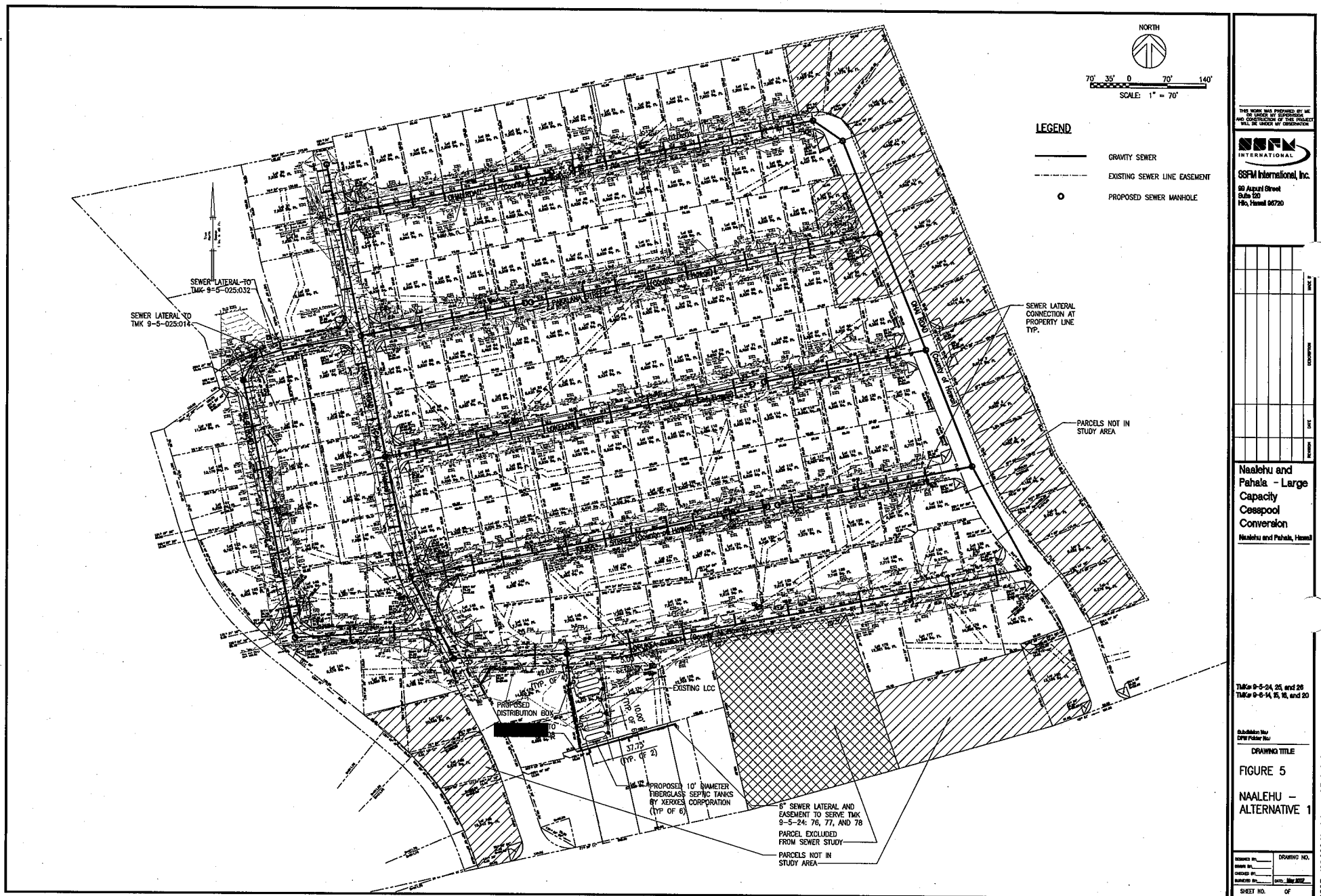
The following will be used to evaluate the success of the project:

1. Timely completion of the project, in accordance with the plans and specifications.
2. Elimination of the large capacity cesspools owned by C. Brewer that are currently serving a large portion of the Naalehu community.
3. Compliance with the EPA regulations, 40 CFR 144 & 145.

VII. Reporting Schedule:

The County will submit Annual Performance Reports in accordance with 40CFR31.40. Semi-Annual Performance Reports will be provided when work is progressing.

**VIII. Attachments**





**Attachment 3**

**TABLE 1: NAALEHU LARGE CAPACITY CESSPOOL COVERSION-SCHEDULE OF DELIVERABLES AND COST BREAKDOWN**

Task	Sub-Task	Estimated Completion	Deliverable	Estimated Cost	Category of Funds
<b>Task 1-PLANNING (SSFM) - Na'alehu and Pahala</b>		<b>2007 - Fourth Quarter</b>			
	Task 1.1- Provide Preliminary Engineering Report	2007 - Third Quarter	PER	\$299,100	Actual Paid by County; Contractural Services: Engineering
	Task 1.2- Provide Environmental Assessment	2007 - Fourth quarter	EA		
<b>Task 2-NAALEHU LAND ACQUISITION</b>		<b>2008 - Fourth Quarter</b>			
	Task 2.1- Phase I ESA for TMK 9-5-024:010	2007 - Fourth Quarter	Phase I ESA Report	\$4,478	Actual Paid by State Department of Health HEER Office
	Task 2.2 - ESA and Appraisal of TMK 9-5-024:007	2008 - Second Quarter	ESA Report and Appraisal Report	\$22,000	County
	Task 2.3-Purchase of TMK 9-5-024:007	2008 - Third Quarter	Deed	\$980,000	County
	Task 2.3.1 Purchase of Easements for Sewer Collection System	2008 - Third quarter	Deed	\$50,000	County
<b>Task 3 -NAALEHU DESIGN (FUKUNAGA &amp; ASSOCIATES)</b>		<b>2009 - First Quarter</b>			
	Task 4.1- Revise PER and NEPA-like Document for treatment and disposal on TMK 9-5-024:007	2009 - First Quarter	PER and EA Revision	\$40,000	County
	Task 4.2- Naalehu Collection and Septic Tank System Design	2009 - First quarter	Design Documents	\$359,695	County
<b>Task 5 -NAALEHU CONSTRUCTION</b>		<b>2011 - Second Quarter</b>			
	Task 5.1-Private lateral installation by others (C.Brewer)	2010 - Second Quarter	N/A - Work by Private Entity	By Others	By Others
	Task 5.2-Naalehu Collection and Septic Tank System	2010 - Fourth Quarter	Completion of Collection	\$8,021,000	Contractural Services: Construction
	Task 5.3- Private lateral hook-up to new collection system	2011 - First Quarter	Connection of Private Laterals to new Collection System	N/A	By Others
	Task 5.4-Conversion of LCC to Seepage Pit for redunant disposal system.	2011 - First Quarter	UIC Conversion Report	included in design cost	County

**TOTAL = \$9,776,273**

Task Deliverables → OIT  
 which is HPA \$.  
 Category of funds: contracts  
 other